In the Claims:

1. (original) A fabrication method, comprising the steps of:

monitoring the exhaust of a process chamber; and

automatically sampling said exhaust when a predetermined event occurs.

2. (original) The method of Claim 1, wherein said step of monitoring is done using an in-situ particle monitor.

3. (original) The method of Claim 1, wherein said step of sampling is done by inserting a collection device into said exhaust.

4. (original) The method of Claim 1, wherein said event is the detection of a particle excursion.

5. (original) The method of Claim 1, wherein said exhaust is sampled by redirecting said exhaust to a sampling area.

6. (original) The method of Claim 1, wherein an electrical control signal of said process chamber is monitored and correlated to said event.

7. (original) A fabrication method, comprising the steps of:

monitoring at least one signal of a process chamber; and

sampling the exhaust from said process chamber when a predetermined event occurs.

8. (original) The method of Claim 7, wherein said signal is an electrical control signal.

9. (original) The method of Claim 7, wherein said predetermined event is a variation in said signal.

10. (original) The method of Claim 7, wherein said predetermined event is the detection of a given particle flux by an in-situ particle monitor located in said exhaust.

11. (original) A fabrication method, comprising the steps of:

monitoring a signal from a process chamber;

monitoring the exhaust from said process chamber; and

correlating variations in said signal to particle excursions in said exhaust to produce relationships between said variations and said excursions.

12. (original) The method of Claim 11, further comprising the step of analyzing said particle excursion using said relationship.

13. (original) The method of Claim 11, further comprising the step of triggering sample collection from said exhaust according to said variations in said signal.

14. (original) A wafer processing system, comprising:

a chamber with an exhaust;

a particle monitor located in said exhaust;

wherein said particle monitor is connected to cause a particle sampler to gather samples from said exhaust.

15. (original) The system of Claim 14, wherein said sampler gathers samples by being inserted into said exhaust.

16. (original) The system of Claim 14, wherein said sampler gathers samples by opening valves so that said exhaust passes to a sampling area.

17. (original) The system of Claim 14, wherein said sampler is a membrane filter.

18. (original) The system of Claim 14, wherein said monitor causes said sampler to gather samples when a predetermined particle flux is detected.